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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,071	04/08/2002	Georg Schneider	WI.1706PCT-US	6951

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EXAMINER	
HINZE, LEO T	
ART UNIT	**PAPER NUMBER**
2854	

DATE MAILED: 04/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/089,071	SCHNEIDER ET AL.	
	Examiner	Art Unit	
	Leo T. Hinze	2854	

-- The MAILING DATE of this communication app ars on th cover sheet with the correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 January 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *15,17,18,25,27,29,31,33 and 34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *15,17,18,25,27,29,31,33 and 34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 April 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 15, 17-18, 25, 27, 29, 31, and 33-34 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 5 of Dauner, U.S. Patent No. 6,688,223 B1 in view of Scannell, US 5,292,298.

Claim 5 of Dauner teaches a cylinder of a rotary printing press comprising: a cylinder base body, said cylinder base body having an outer circumference; a cylinder outer body surrounding on said cylinder base body, said cylinder outer body having an outer shell surface and an inner surface; at least one clamping conduit in said cylinder outer body, said at least one clamping conduit having an axial length substantially greater than a radial depth; means supporting said cylinder base body in said cylinder outer body and defining a space between said cylinder base body outer circumference and said cylinder outer body inner surface; and at least one tempering medium distribution conduit in said space, said inner surface of said cylinder outer body, which acts with a tempering medium in said distribution conduit, being spaced from said outer circumference of said cylinder base body by said space at a distance of between 2 mm and 5 mm; wherein said distribution conduit flow chamber extends in an axial direction of said cylinder in a spiral manner and is arranged along said inner surface of said cylinder outer body and oriented toward an interior of said cylinder; wherein said spiral is multiple threaded.

Claim 5 of Dauner does not teach:

- a plurality of spiral shaped strips on said cylinder base body outer circumference; a multiplex-threaded spiral shaped conduit on said cylinder base body outer circumference; a plurality of separate spiral-shaped flow paths; means for separately supplying a tempering medium to, and for removing a tempering medium from each of said plurality of separate spiral shaped flow paths (claim 15);
- where the conduit is octuply threaded (claim 17);

- wherein a ratio of said volume to said area is in the range of 1200:1 to 1600:1 (claim 18);
- wherein a ratio of said wall thickness to said axial length is in a range of 1:200 to 1:1200 (claim 33);
- wherein said range is between 1:400 and 1:1000 (claim 34).

Scannell teaches a roll with an internal heat exchange structure including:

- a plurality of spiral shaped strips (14, Fig. 1) on said cylinder base body outer circumference; a multiplex-threaded spiral shaped conduit on said cylinder base body outer circumference (12, Fig. 1); a plurality of separate spiral-shaped flow paths (19, Fig. 2); means for separately supplying a tempering medium to (40, Fig. 2), and for removing a tempering medium from each of said plurality of separate spiral shaped flow paths (40, Fig. 2; "second end has all the features of the first section", col. 4, lines 56-58) (claim 15).

It has been held that optimization through the course of routine experimentation is not an inventive step. See MPEP § 2144.05. It has been held the duplication of parts is not an inventive step. See MPEP § 2144.04 (VI).

Regarding claim 15, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Dauner to use a plurality of separate spiral-shaped flow paths; means for separately supplying a tempering medium to, and for removing a tempering medium from each of said plurality of separate spiral shaped flow paths, because Scannell teaches that it is well-known in the art to use a plurality of spiral shaped conduits with

individual inlet and outlet paths, and one having ordinary skill in the art would recognize the advantages of such an arrangement, such as improved heat transfer characteristics due to the increased number of shorter flow paths.

Regarding claim 17, it would have been obvious to one having ordinary skill in the art at the time the invention was made to additionally modify Dauner to use eight spiral conduits instead or six taught by Scannell, because one having ordinary skill in the art could easily add additional spiral conduits as necessary, and one having ordinary skill in the art could, in the course of routine experimentation, discover that eight conduits provides better heat transfer than one or six conduits.

Regarding claims 33 and 34, it would have been obvious to one having ordinary skill in the art at the time the invention was made to additionally modify Dauner, because one having ordinary skill in the art would recognize that it is desirable to design the apparatus to obtain the best possible heat transfer ratios, and one having ordinary skill in the art could easily obtain the claimed ratios in the course of routine experimentation.

Regarding claims 25, 27, 29, and 31, the combination of Dauner and Scannell teaches all that is claimed as discussed above.

Claim Objections

3. Claims 15, 17-18, 25, 27, 29, 31, and 33-34 are objected to because of the following informalities: claim 15, line 14, it appears that "conduit," should be deleted.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 15, 17-18, 25, 27, 29, 31, and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rau et al., US 5,784,957 in view of Scannell, US 5,292,298.

Rau et al. teach a printing mechanism and means for cooling transfer and form cylinders, including:

- a cylinder (43, Fig. 3) of a rotary printing press comprising: a cylinder base (51, Fig. 3) body having a cylinder base body outer circumference; a spiral shaped strip (78, Fig. 3) on said cylinder base body outer circumference; a cylinder outer body (50, Fig. 3)

supported by said spiral shaped strip and spaced from said cylinder base body by said spiral shaped strip, said cylinder outer body being non self-supporting and having a small wall thickness defined by an inner surface and an outer shell surface; a spiral shaped conduit on said cylinder base body outer circumference and defined by said spiral shaped strip; a spiral-shaped flow path, through which tempering medium can flow, said spiral-shaped flow path being defined by said spiral shaped conduit on said cylinder base body circumference and said inner surface of said cylinder outer body, said outer shell surface of said cylinder outer body being adapted for conducting printing ink (col. 2, lines 6-9) and means for supplying a tempering medium to (55, Fig. 3), and for removing a tempering medium from (56, Fig. 3) the spiral shaped flow path (claim 15);

- wherein said conduit has a volume and further wherein said cylinder outer body shell surface has an area (Fig. 3) (claim 18);
- a supply line (65, Fig. 3) and a removal line (66, Fig. 3) for said tempering medium (claim 25);
- at least one journal for supporting said cylinder (44, 45, Fig. 3) said supply line and said removal line being coaxially arranged in said journal (Fig. 3) (claim 27);
- wherein said cylinder is an inking roller (col. 2, lines 6-9) (claim 29);
- wherein said cylinder is a screen roller (col. 2, lines 6-9) (claim 31);
- wherein said cylinder outer body has an axial length (claim 33).

Rau et al. do not teach:

- a plurality of spiral shaped strips on said cylinder base body outer circumference; a multiplex-threaded spiral shaped conduit on said cylinder base body outer circumference; a plurality of separate spiral-shaped flow paths; means for separately supplying a tempering medium to, and for removing a tempering medium from each of said plurality of separate spiral shaped flow paths (claim 15);
- where the conduit is octuply threaded (claim 17);
- wherein a ratio of said volume to said area is in the range of 1200:1 to 1600:1 (claim 18);
- wherein a ratio of said wall thickness to said axial length is in a range of 1:200 to 1:1200 (claim 33);
- wherein said range is between 1:400 and 1:1000 (claim 34).

Scannell teaches a roll with an internal heat exchange structure including:

- a plurality of spiral shaped strips (14, Fig. 1) on said cylinder base body outer circumference; a multiplex-threaded spiral shaped conduit on said cylinder base body outer circumference (12, Fig. 1); a plurality of separate spiral-shaped flow paths (19, Fig. 2); means for separately supplying a tempering medium to (40, Fig. 2), and for removing a tempering medium from each of said plurality of separate spiral shaped flow paths (40, Fig. 2; "second end has all the features of the first section", col. 4, lines 56-58) (claim 15);
- where the conduit is sextuply threaded (claim 17).

It has been held that optimization through the course of routine experimentation is not an inventive step. See MPEP § 2144.05. It has been held the duplication of parts is not an inventive step. See MPEP § 2144.04 (VI).

Regarding claim 15, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Rau et al. to replace the single spiral conduit with a plurality of spiral shaped strips on said cylinder base body outer circumference; a multiplex-threaded spiral shaped conduit on said cylinder base body outer circumference; a plurality of separate spiral-shaped flow paths; means for separately supplying a tempering medium to, and for removing a tempering medium from each of said plurality of separate spiral shaped flow paths, because Scannell teaches that it is well-known in the art to use a plurality of spiral shaped conduits with individual inlet and outlet paths, and one having ordinary skill in the art would recognize the advantages of such an arrangement, such as improved heat transfer characteristics due to the increased number of shorter flow paths.

Regarding claim 17, it would have been obvious to one having ordinary skill in the art at the time the invention was made to additionally modify Rau et al. to use eight spiral conduits instead of the one taught by Rau et al. or six taught by Scannell, because one having ordinary skill in the art could easily add additional spiral conduits as necessary, and one having ordinary skill in the art could, in the course of routine experimentation, discover that eight conduits provides better heat transfer than one or six conduits.

Regarding claims 18, 33, and 34, it would have been obvious to one having ordinary skill in the art at the time the invention was made to additionally modify Rau et al., because one

having ordinary skill in the art would recognize that it is desirable to design the apparatus to obtain the best possible heat transfer ratios, and one having ordinary skill in the art could easily obtain the claimed ratios in the course of routine experimentation.

Regarding claims 25, 27, 29, and 31, the combination of Rau et al. and Scannell teaches all that is claimed as discussed above.

Response to Arguments

7. Applicant's arguments with respect to claims 15, 17-18, 25, 27, 29, 31, and 33-34 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leo T. Hinze whose telephone number is (571) 272-2167. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leo T. Hinze
Patent Examiner
AU 2854
27 March, 2004

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